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RESEARCH NEWS

Higher iron concentrations may protect against Parkinson's disease

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Serum concentrations of iron have been linked to risk of Parkinson's disease, and a new genetic study suggests that the link might be causal. In a series of analyses, genetic variants that increased serum concentrations of iron seemed to protect against Parkinson's disease. Genetic variation is randomly allocated (so called Mendelian randomisation), so associations between genetically determined iron concentrations and Parkinson's disease can't be undermined by confounding. The authors estimate that the risk of Parkinson's disease falls by a relative 3% (95% CI 1% to 6%) for every 10 μg/dL (1 μg/dL= 0.18 μmol/L) increase in serum iron. Alternatively, absolute risk in older white people falls from 100/10 000 to 88/10 000 with every standard deviation (38 μg/dL) increase in iron concentration.

Mendelian randomisation isn't foolproof, say the researchers, but it gives us the best evidence so far that serum iron might have a direct effect on risk of Parkinson disease. We don't yet know how, and it's too early to say whether manipulating serum iron can reduce risk. These genetic effects operate over a whole lifetime.

These findings emerged from analyses of three different genetic variants in almost 22 000 people from Europe and Australia, combined with meta-analyses of 20 809 people with Parkinson's disease and 88 892 controls from Europe and North America.

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